

# **MULTIPLE WAY STUD POKER GAMES**

## **Cross-reference to Related Application**

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2       This application is based on and claims the benefit of  
3 U.S. Provisional Application Serial No. 60/319504, filed  
4 August 28, 2002, entitled "Multiple Way Stud Poker Games."

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6       This invention relates primarily to video poker games,  
7 and more particularly to electronic video stud poker games  
8 that are based on poker hand rankings and provide for the  
9 simultaneous play of multiple stud poker hands.

10

## **Background of the Invention**

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12       Five card, six card and seven card stud poker games have  
13 been played for many years, usually in a poker room setting in  
14 which a plurality of players play against each other striving  
15 to obtain the highest ranking poker hand (or lowest ranking  
16 poker hand in Lo-Ball poker) in order to win the pot which  
17 comprises the wagers made by the players during the play of

1 the game.

2       Electronic video poker has also been a staple in gaming  
3 casinos for many years and this well known game is a single  
4 player game based on draw poker. The player attempts to  
5 achieve a winning poker hand ranking by discarding from an  
6 initial five card hand and drawing new cards in order to try  
7 and improve his poker hand. A pay table is provided to show  
8 the player what he can win based on the poker hand ranking  
9 achieved after the draw step and the amount wagered by the  
10 player.

11       There have been attempts to adapt stud poker to an  
12 electronic video game format. One attempt involved a single  
13 player seven card stud game in which the player makes a first  
14 wager and initially received three cards face up. In one  
15 version of this game, the player has the option of making  
16 additional wagers before the player receives the fourth,  
17 fifth, sixth and seventh cards. In another version, the  
18 player also has the option of making additional wagers before  
19 receiving the fourth, fifth, sixth and seventh cards unless  
20 the player has already achieved a winning poker hand combina-

1 tion, in which case the player is not allowed to make addi-  
2 tional wagers. In either version, the final seven cards are  
3 analyzed and the best five card hand is used to determine the  
4 poker hand ranking of the player's hand. A pay table is used  
5 based on five card poker hand rankings and the amount wagered  
6 by the player to determine the amount won by the player when  
7 he achieves a winning hand.

8 Another popular single player stud poker game is known as  
9 DOUBLE DOWN STUD poker. This game is described in U.S. Patent  
10 No. 5,100,137 and U.S. Patent No. 5,167,413, the disclosures  
11 of each of which are incorporated herein by this reference.  
12 In DOUBLE DOWN STUD poker, the player makes a first wager and  
13 is dealt four cards all face up. The player may make an  
14 additional wager prior to receiving the fifth card. After the  
15 fifth card is dealt, the five card hand is compared to a pay  
16 table to determine if the player has a winning or losing card  
17 combination based on poker hand ranking.

18 Another stud poker game that has been adapted to a single  
19 player video poker format is a game known as LET IT RIDE®. In  
20 this game, the player makes a wager of three units at the

1 start of each round of play. The player is then shown three  
2 cards face up. The player may decrease his wager by one unit  
3 or let all three wagers ride. The player is then shown a  
4 fourth card. The player may decrease his wager by one unit or  
5 let his wagers ride. The player is then shown a fifth card  
6 and the poker hand ranking of the final five card hand is used  
7 to determine winning or losing plays based on a pay table.  
8 The method of play of LET IT RIDE® is described in United  
9 States Patent No. 5,288,081, United States Patent No.  
10 5,417,430 and United States Patent No. 5,544,892, the  
11 disclosures of which are incorporated herein.

12 Another stud poker game is a game known as Three Card  
13 Poker in which the player simply plays one or more three card  
14 stud poker hands. The pay table is based on three card poker  
15 hand rankings. Typical three card stud poker hand rankings  
16 are disclosed in U.S. Patent No. 5,685,774 and U.S. Patent No.  
17 6,012,719, the disclosures of each of which are incorporated  
18 herein.

19 There has also been a game proposed by IGCA, under the  
20 name 3 HAND POKER, in which the player plays draw poker using  
21 a five card poker hand and two three card poker hands. Each  
22 of the three card poker hands are a subset of the five card

1 poker hand. The player plays the five card poker hand as  
2 would be conventional in draw poker by holding the desired  
3 cards from the initial five card deal and receiving  
4 replacement cards for the discarded cards. The final five  
5 card hand is analyzed to determine whether it is a winning  
6 five card poker hand according to a five card poker hand pay  
7 table. The first three cards of the final five card hand are  
8 also analyzed to determine whether these three cards form a  
9 winning three card poker hand according to a three card poker  
10 hand pay table. Likewise, the last three cards of the final  
11 five card hand are also analyzed to determine whether these  
12 three cards form a winning three card poker hand according to  
13 a three card poker hand pay table.

14 None of the previous attempts to put stud poker on an  
15 electronic video poker gaming machine provide the player with  
16 the opportunity to play multiple hands of stud poker with each  
17 of the hands being the initial five card hand or a subset of  
18 the initial five card hand.

19 It is an object of the present invention to provide a  
20 stud poker game in which the player can achieve a plurality of  
21 winning card combinations from a single deal of the cards.  
22 The player can win large payouts on a single deal of the cards

1 for being dealt particularly good initial cards. This allows  
2 the player to benefit from a single deal of good cards in that  
3 more than one of the hands being played by the player becomes  
4 a winning hand.

5 It is a feature of the present invention to deal and  
6 display an initial stud poker hand to the player. The initial  
7 hand is analyzed to determine its poker hand ranking and the  
8 player receives an award for winning poker hand according to a  
9 pay table. Then various subsets of the initial hand are also  
10 analyzed to determine if any of these subsets also forms a  
11 winning poker hand combination and the player receives one or  
12 more additional awards according to a pay table.

13 It is an advantage of the present invention that the  
14 player can receive multiple awards on a single deal of the  
15 initial cards. The method of play provides for a high hit  
16 frequency because even if the initial deal of cards does not  
17 form a winning combination, one or more of the subsets of  
18 cards of the initial deal may form a winning combination.

19 Other objects, features and advantages of the present  
20 invention will become apparent from a consideration of the

1 following detailed description.

## 2 **Summary of the Invention**

3 The method of the present invention involves the player  
4 making a wager to play a stud poker game. The wager is  
5 allocated among a plurality of poker hands to be played by the  
6 player. One of the wagers is allocated to a full hand of  
7 cards and the other wagers are allocated among poker hands  
8 that are comprised of various subsets of the full hand.

9 The player is then dealt the full hand of cards from a  
10 deck of playing cards. The player wins or loses depending on  
11 the stud poker hand ranking of the full hand. The amount won  
12 by the player is based on the poker hand ranking of the hand  
13 according to a pay table and the amount wagered by the player  
14 on the full hand.

15 The various subsets of hands are then analyzed to  
16 determine whether there are any winning hand combinations  
17 among the subset of hands. Awards for winning hand  
18 combinations are made to the player based on the poker hand  
19 ranking of each subset hand according to a pay table and the

1 amount wagered by the player on each subset hand.

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### 3 **Brief Description of the Drawings**

4 Figure 1 shows the gaming machine configured to practice  
5 the method of present invention including a showing of the  
6 distribution of multiple stud poker hands.

7 Figure 2 shows the gaming machine configured to practice  
8 the method of present invention including a representative  
9 deal of multiple stud poker hands that could occur during the  
10 play of the game.

11

### 12 **Detailed Description of the Preferred Embodiments**

13 The present invention is preferably an electronic video  
14 stud poker game and is designed to be played by having the  
15 stud poker hands displayed on a video screen. Alternatively,  
16 the present invention can also be played as a live table game  
17 with a dealer shuffling and dealing hands to one or more  
18 players seated around a gaming table.

19 Figure 1 shows a gaming machine upon which the method of



1 the present invention can be carried out. The gaming machine  
2 10 includes a video screen display 20 on which is shown the  
3 playing cards that will be used during the play of the method  
4 of the present invention. The video screen display 20 also  
5 includes other information and data presented to the player to  
6 allow the player to understand the play of the game and to  
7 effect the operation of the method.

8 In the preferred embodiment of the present invention, the  
9 video screen display 20 shows a credit meter 22 and a display  
10 of the "bet per hand" 24 which is the number of credits  
11 wagered on each hand for a particular round of play of the  
12 game. The video screen display also has a DEAL touch screen  
13 location to allow the player to cause the initial deal of the  
14 cards to be displayed on the video screen display 20. Other  
15 touch screen locations allow the player to make his initial  
16 wager, which can be made one credit at a time using the BET  
17 location 26 or which can be made by wagering the maximum  
18 number of credits allowed by the gaming machine using the BET  
19 MAX location 28.

20 The gaming machine 10 also has a button panel 40 which

1 includes typical buttons that the player may press to activate  
2 various actions during the play of the method of the present  
3 invention. A CASH OUT button 41 is provided to allow the  
4 player to collect any credits which the player has accrued on  
5 the credit meter 22. A BET MAX button 42 and a BET button 44  
6 are provided to allow the player to wager either the maximum  
7 amount of credits or to wager one credit at a time on the play  
8 of the game as desired by the player, if the player wishes to  
9 use buttons to place his wager instead of using the touch  
10 screen locations 26 and 28 to place his wager. A DEAL button  
11 46 is provided to allow the player to effect the initial deal  
12 step of the method of play as desired should the player prefer  
13 to use the button panel instead of the DEAL screen location 47  
14 on the video screen display 20.

15 The gaming machine 10 also includes a coin head 50 to  
16 allow the player to insert coins or gaming tokens as wagers to  
17 allow play of the gaming machine 10. A bill acceptor slot 52  
18 is also provided on the gaming machine 10. In order to accrue  
19 credits that may be used to play the gaming machine 10, the  
20 player inserts paper currency or other suitable script or

1 gaming coupons into the bill acceptor slot 52 behind which, on  
2 the interior of the gaming machine, is mounted a bill acceptor  
3 which takes in and validates the currency. The monetary value  
4 of the inserted currency is then applied to the credit meter  
5 22, the credits on which the player may use to play the gaming  
6 machine.

7 A plurality of buttons 48 can also be provided on the  
8 button panel 40 to allow the player to select the number of  
9 hands which the player wishes to play. For example, ONE HAND  
10 button 48A allows the player to select to play one hand of  
11 stud poker. TWO HAND button 48B allows the player to select  
12 to play two hands of stud poker. THREE HAND button 48C allows  
13 the player to select to play three hands of stud poker. FOUR  
14 HAND button 48D allows the player to select to play four hands  
15 of stud poker. FIVE HAND button 48E allows the player to  
16 select to play five hands of stud poker. SIX HAND button 48F  
17 allows the player to select to play six hands of stud poker.  
18 Any suitable distribution of the number of hands can be  
19 allocated to the buttons and fewer or more than six buttons 48  
20 can be used.

1           Instead of using buttons on the button panel, the video  
2 screen display 20 can be provided with touch screen locations  
3 (not shown) that the player would touch to select the number  
4 of hands that the player wishes to play.

5           Any other conventional and suitable equipment can be  
6 included in the gaming machine.

7           The preferred embodiment of the present invention uses a  
8 standard fifty-two card deck of playing cards. A player makes  
9 a wager to activate the game and the player selects to play  
10 six hands during that round of the game. The wager can be  
11 allocated equally among all six hands, or the player may elect  
12 to wager different amounts on each of the six hands.

13           The six hands comprise a full hand of five cards and five  
14 other hands which are subsets of the full five card hand. For  
15 illustration purposes, Figure 1 shows the six hands. The full  
16 hand 60 comprises five cards labeled card 1, card 2, card 3,  
17 card 4 and card 5.

18           There are also two four card hands which are subsets of  
19 the full hand 60. Hand 71 comprises the four cards labeled  
20 card 1, card 2, card 3 and card 4. Hand 72 comprises the four

1 cards labeled card 2, card 3, card 4 and card 5.

2       There are also three three card hands which are subsets  
3 of the full hand 60. Hand 81 comprises the three cards  
4 labeled card 1, card 2 and card 3. Hand 82 comprises the  
5 three cards labeled card 2, card 3 and card 4. Hand 83  
6 comprises the three cards labeled card 3, card 4 and card 5.

7       After the wagers are made and after the deck of playing  
8 cards has been electronically shuffled, a full stud poker hand  
9 of five cards 60 is randomly dealt and displayed face up to  
10 the player on the screen display 20. Each of the cards from  
11 the full hand are redisplayed in each of the subset hands  
12 according to the appropriate card location as shown in Figure  
13 1.

14       Figure 2 shows an example of such a deal in which the  
15 player is dealt as the full hand 60 the Seven of Spades as  
16 card 1, the Six of Spades as card 2, the Five of Spades as  
17 card 3, the Queen of Spades as card 4 and the Queen of  
18 Diamonds as card 5.

19       The player has been dealt a Pair of Queens in the full  
20 hand 60 and, using a suitable pay table for this method of

1 play, this would be a winning hand. The player is paid  
2 according to the pay table for a Pair of Jacks or Better based  
3 on the amount of the player's wager.

4 Any suitable pay table may be used for the full hand of  
5 five card stud poker. One suitable pay table for five card  
6 stud poker is shown in Table 1:

Poker Hand Combination	Payout Odds
Less than Pair of Sevens	Losing Hand
Pair of Sevens thru Aces	2 for 1
Two Pair	4 for 1
Three of a Kind	5 for 1
Straight	10 for 1
Flush	15 for 1
Full House	25 for 1
Four of a Kind (Fives through Kings)	100 for 1
Four of a Kind (Twos, Threes or Fours)	200 for 1
Four Aces	300 for 1
Four Twos, Threes or Fours with a Kicker	500 for 1
Four Aces with a Kicker	800 for 1
Straight Flush	200 for 1
Royal Flush	4000 for 1

8  
9 Table 1.

1 As is generally recognized by those of skill in the art,  
2 "kicker" means an Ace, Two, Three or Four, as appropriate.  
3 Based on the pay table in Table 1, the player would win two  
4 credits for each credit wagered on the full hand 60 for  
5 achieving a Pair of Queens.

6 Additionally, each of the two four card hands are  
7 analyzed to determine whether any winning hand combinations  
8 appear. Appropriate card combinations are designated as  
9 winning four card stud poker hands and would be shown in a  
10 suitable pay table.

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1 Any suitable pay table may be used for the four card stud  
2 poker hands. One suitable four card stud pay table is shown  
3 in Table 2:

Poker Hand Combination	Payout Odds
Less than Pair of Fours	Losing Hand
Pair of Fours thru Aces	1 for 1
Two Pair	8 for 1
Three of a Kind	10 for 1
Straight	20 for 1
Flush	28 for 1
Full House	25 for 1
Four of a Kind	200 for 1
Straight Flush	100 for 1
Royal Flush	1000 for 1

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6 Table 2.

7 When used in connection with four card stud poker hands,  
8 a Straight is a four card straight and a Flush is a four card  
9 Flush. A Straight Flush is a four card straight all in the  
10 same suit. A Royal Flush is considered to be either the Ace,  
11 King, Queen and Jack of the same suit or the King, Queen, Jack  
12 and Ten of the same suit.



1       With reference to Figure 2, the player has been dealt  
2   Four Spades in the first four card hand 71 and, using a  
3   suitable pay table such as Table 2 for this method of play,  
4   this would be a winning hand. The player is paid according to  
5   the pay table for a Flush based on the amount of the player's  
6   wager. Using the pay table shown in Table 2, the player would  
7   win twenty-eight credits for each credit wagered on hand 71  
8   for achieving a Flush.

9       With reference to the second four card hand 72, the  
10   player has been dealt a Pair of Queens. Using the pay table  
11   shown in Table 2, the player would win eight credits for each  
12   credit wagered on hand 72 for achieving a Pair of Fours or  
13   Better.

14       Finally, each of the three three card hands are analyzed  
15   to determine whether any winning hand combinations appear.  
16   Appropriate card combinations are designated as winning three  
17   card stud poker hands and would be shown in a suitable pay  
18   table.

19       Any suitable pay table may be used for the three card  
20   stud poker hands. One suitable three card stud pay table is

1 shown in Table 3:

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Poker Hand Combination	Payout Odds
Less than a Pair	Losing Hand
Any Pair	1 for 1
Three of a Kind	20 for 1
Straight	9 for 1
Flush	8 for 1
Straight Flush	30 for 1
Royal Flush	60 for 1

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Table 3.

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When used in connection with three card stud poker hands, a Straight is a three card straight and a Flush is a three card Flush. A Straight Flush is a three card straight all in the same suit. A Royal Flush is considered to be either the Ace, King and Queen of the same suit, the King, Queen and Jack of the same suit or the Queen, Jack and Ten of the same suit.

With reference to Figure 2, the player has been dealt a three card Straight Flush in the first three card hand 81 and, using a suitable pay table such as Table 2 for this method of play, this would be a winning hand. The player is

1 paid according to the pay table for a Straight Flush based on  
2 the amount of the player's wager. Using the pay table shown  
3 in Table 2, the player would win thirty credits for each  
4 credit wagered on hand 81 for achieving a Straight Flush.

5 With reference to the second three card hand 82, the  
6 player has been dealt a three card Flush. Using the pay table  
7 shown in Table 2, the player would win eight credits for each  
8 credit wagered on hand 82 for achieving a Flush.

9 With reference to the third three card hand 83, the  
10 player has been dealt a Pair of Queens. Using the pay table  
11 shown in Table 2, the player would win one credit for each  
12 credit wagered on hand 82 for achieving a Pair.

13 In connection with the five card, four card and three  
14 card stud poker hands, any suitable poker hand combinations  
15 can be designated as winning and losing hand combinations.  
16 The amount won by the player is determined according to a pay  
17 table based on the poker hand combination achieved by the  
18 player and the amount wagered by the player.

19 Typically, pay tables are determined based on the  
20 mathematical probability of certain poker combinations

1 occurring during the play of the game. Any suitable pay table  
2 can be used based on the percentage game return which the  
3 gaming establishment wishes to offer to the player.

4 In one variation of the present invention, the number of  
5 hands that are used from subsets of the full hand can be any  
6 desired number. For example, there are five possible four  
7 card combinations of the full five card hand and there are  
8 nine possible three card combinations of the full five card  
9 hand. Any one, more or all of these four and three card  
10 combinations may be used or selected as the stud hands that  
11 are used as subsets of the full hand.

12 Another variation can use full stud hands having more  
13 than five cards B such as six card, seven card or more card  
14 stud hands. Winning hand combinations can be based on the  
15 best five card poker hand achieved out of the six, seven or  
16 more card hands. Alternatively, the winning hand combinations  
17 can be the best six, seven or more card stud poker hand  
18 achieved. When six or more card poker hands are used, then  
19 additional non-traditional poker hand rankings can be used as  
20 winning card combinations such as two Three-of-a-Kinds, or a

1 Four-of-a-Kind and a Pair, Six (or more) Card Straight Flushes  
2 and Six (or more) Card Royal Flushes. The pay tables would be  
3 modified to account for the mathematical probabilities of  
4 achieving these different poker hand rankings.

5 If the full stud hand has more than five cards, then the  
6 number of subset hands becomes even larger. The pay tables  
7 would be modified mathematically to account for such a  
8 variation.

9 Another variation would include designating certain cards  
10 as wild cards or adding one or more Jokers to the standard  
11 deck and using the Jokers as wild cards. When wild cards are  
12 used, the pay tables would need to be recalculated to reflect  
13 the change in the probability of the various winning hand  
14 combinations as well as any other desired card combinations  
15 (such as Five-of-a-Kinds or Wild Royal Flushes) that could be  
16 used as winning combinations.

17 While the invention has been illustrated with respect to  
18 several specific embodiments thereof, these embodiments should  
19 be considered as illustrative rather than limiting. Various  
20 modifications and additions may be made and will be apparent

1 to those skilled in the art. Accordingly, the invention  
2 should not be limited by the foregoing description, but rather  
3 should be defined only by the following claims.